

ADDITIONAL NOTES ON NEARCTIC MECOPTERA.

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During the summer and fall of 1931, after my revision¹ of the Nearctic Mecoptera had been sent to the press, several additional and interesting collections of these insects were forwarded to me for identification. Among them was the collection of the late James S. Hine, who wrote two synoptic papers on the North American scorpion-flies over thirty years ago. He himself had selected and packed the material for me, but succumbed to his illness before he was able to send it. Mr. C. H. Walker, of the Ohio State Museum, noting the package on Mr. Hine's desk, kindly shipped it to me. For the other specimens, received too late for inclusion in my paper, I am indebted to Professor James G. Needham, Cornell University; Dr. F. M. Gaige, University of Michigan, and Mr. Robert Browne, Pittsfield, Mass. Although there are no new species in any of these collections, several specimens are of unusual interest because of the localities at which they were secured. In the following list I have included the noteworthy records:

Merope tuber Newman.

Professor Needham secured over a hundred specimens of this rare and remarkable insect at Davenport, West Virginia, during the latter part of June, 1930. This discovery of a locality where *Merope* is relatively abundant may lead to the knowledge of its life-history.

Panorpa mirabilis Carp.

One male from Oakmont, New Jersey (June 14), in the Michigan collection; this is the only record in that state aside from the holotype (Andover).

Panorpa claripennis Hine.

In Hine's collection there are several specimens of both sexes from Sandusky and Georgesville, Ohio (July); this is the first record of the species in that state. From Mr. Browne I also received the first specimen (♂) of *claripennis* recorded from Massachusetts; it was collected by him at Pittsfield, June 9, 1931.

¹ Bull. Mus. Comp. Zool., 72 (6): 205-277; pls. 1-8. 1931.

Panorpa nebulosa Westwood.

In Hine's collection there are several specimens from Akron (July 24) and Coshocton (June 11), Ohio; the only previous record for that state is Columbus.

Panorpa sigmoides Carp.

Several specimens of this species are included in Hine's collection, all from Sandusky, Ohio (July 12), comprising the first record from the state. *Sigmoides* has been taken commonly in the northeastern section of Illinois and adjoining parts of Indiana. Its presence in northern Ohio extends the range considerably, and suggests that it occurs in other neighboring states.

Panorpa acuta Carp.

Numerous males from Elkmont, Servier Co., Tennessee (August 14, 1931), are in the Michigan collection. This is the first record in the state.

Panorpa maculosa Hagen.

In the University of Michigan collection there is a male from Elkmont, Servier Co., Tennessee (August 11, 1930). This is only the second record of the species in Tennessee, the other being much further westward, in Cumberland Co.

Panorpa submaculosa Carp.

Hine's collection includes numerous specimens from Ohio, from which the species has not previously been recorded. The following are the localities: Medina Co. (June 28), Coshocton Co. (July 11), Cincinnati (July 13), Sugar Grove (May 30).

Panorpa latipennis Hine.

In the Michigan collection there is a male from Rochester, Michigan (May 27, 1928). This is a very interesting record, since the species has previously been known only from New England, New York, and New Jersey. It suggests that *latipennis* may occur in Ohio, Pennsylvania, and perhaps Indiana.

Bittacus strigosus Hagen.

One male in the Michigan collection taken at Bryson City, North Carolina (July 8, 1931, F. Byers) is the first specimen from the state.

Bittacus pilicornis Westwood.

A large number of specimens were collected by Mr. Browne and the writer at the base of South Mountain, Pittsfield, Massa-

chusetts, during July, 1931. This is the first record of the species in that state, although scattered specimens have been taken in other parts of New England. The insects were flying in the midst of a much larger colony of *strigosus*, covering about an acre.

An Arboreal Nest of *Bombus fervidus* (Fabricius).—Last September, my colleague, Dr. L. R. Cleveland, told me of being attacked in his garden at Jamaica Plain, Boston, by “bees” gathered near brood-cells that apparently had dropped from a tree. The “bees” proved to be workers and young queens of *Bombus fervidus*. The incident seemed of sufficient interest to warrant further investigation.

I found that the bumble-bees had their nest at the height of some thirty feet, in the branches of a spruce, close to the main trunk. The colony evidently had been started in an old bird's nest, and due to the dense branching of the spruce, was exceedingly well hidden from sight and well protected against wind and rain. Nevertheless, it came to grief, probably owing to the bird's nest being either too loosely built or too old. As the bumble-bee colony grew, pieces of the comb came dropping down to the ground, where they attracted some of the bees, who then attacked at once any intruder. Plath (1922, *Psyche*, XXIX, p. 200), has pointed out that *B. fervidus* is one of our most vicious bumble-bees.

I have not been able to find a reference to an arboreal nest of *B. fervidus* in the literature. Franklin, Plath and Frison mention no such cases. Putnam, Franklin and Plath found nests of this species on the surface of the ground, one half to one foot below the surface, in stone walls, in stumps, and the like. Moreover, there appears to be only one published record of a North American bumble-bee nesting any considerable height above the ground. L. O. Howard (1918, *Ent. News*, XXIX, pp. 114-115), writes of a colony of *B. pennsylvanicus* (DeGeer) found at Garrison, Missouri, in an abandoned nest of an English sparrow, in a tall elm tree, twenty or more feet from the ground. Since there are many records of European bumble-bees nesting high up in trees, using for the purpose abandoned nests of birds or mammals, I suspect that similar cases are more frequent in this country than may appear from the literature. They may have been overlooked or not placed on record.—J. BEQUAERT, Boston, Mass.